## RAW SEQUENCE LISTING PATENT APPLICATION US/08/509,359

DATE: 06/17/96 TIME: 10:08:37

INPUT SET: S11080.raw

This Raw Listing contains the General Information Section and up to the first 5 pages.

| 1           |            | SEQUENCE LISTING  |
|-------------|------------|---|
| 2<br>3      | (1) G      | eneral Information:   |
| 4           | (1)        | PAITEDES  |
| 5<br>6<br>7 | (i)        | APPLICANT: ST. GEORGE-HYSLOP, PETER H ENTEREL ROMMENS, JOHANNA M FRASER, PAUL E |
| 8<br>9      | /111       | TITLE OF INVENTION: GENETIC SEQUENCES AND PROTEINS RELATED                      |
| 10          | ( + + /    | TO ALZHEIMER'S DISEASE  |
| 11          |            |   |
| 12          | (iii)      | NUMBER OF SEQUENCES: 160  |
| 13          |            |   |
| 14          | (iv)       | CORRESPONDENCE ADDRESS:   |
| 15          |            | (A) ADDRESSEE: Testa, Hurwitz & Thibeault                                       |
| 16          |            | (B) STREET: High Street Tower - 125 High Street                                 |
| 17          |            | (C) CITY: Boston  |
| 18          |            | (D) STATE: Massachusetts  |
| 19          |            | (E) COUNTRY: U.S.A.   |
| 20<br>21    |            | (F) ZIP: 02110  |
| 22          |            |   |
| 23          | (V)        | COMPUTER READABLE FORM:   |
| 24          | ( • /      | (A) MEDIUM TYPE: Floppy disk  |
| 25          |            | (B) COMPUTER: IBM PC compatible   |
| 26          |            | (C) OPERATING SYSTEM: PC-DOS/MS-DOS   |
| 27          |            | (D) SOFTWARE: PatentIn Release #1.0, Version #1.30                              |
| 28          |            | , ,   |
| 29          | (Vi)       | CURRENT APPLICATION DATA:   |
| 30          | *          | (A) APPLICATION NUMBER: US 08/509,359   |
| 31          |            | (B) FILING DATE: 31-JUL-1995  |
| 32          |            | (C) CLASSIFICATION:   |
| 33          |            | •   |
| 34          | (viii)     | ATTORNEY/AGENT INFORMATION:   |
| 35          |            | (A) NAME: Twomey, Michael J   |
| 36          |            | (B) REGISTRATION NUMBER: 38349  |
| 37          | 4 4 >      | MAY DOWN TO MICH. THEODY AMERICA  |
| 38          | (1X)       | TELECOMMUNICATION INFORMATION:  |
| 39<br>40    |            | (A) TELEPHONE: (617) 248-7362<br>(B) TELEFAX: (617) 248-7100                    |
| 41          |            | (B) IEEEFAX: (017) 240-7100   |
| 42          | (2) INFO   | RMATION FOR SEQ ID NO:1:  |
| 43          | (2, 111201 |   |
| 44          | (i)        | SEQUENCE CHARACTERISTICS:   |
| 45          | (3)        | (A) LENGTH: 2791 base pairs   |
| 16          |            | (P) Type, musicia said  |

### RAW SEQUENCE LISTING PATENT APPLICATION US/08/509,359

DATE: 06/17/96 TIME: 10:08:43

INPUT SET: S11080.raw

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

|   | (xi) Sl    | EQUENCE DES | CRIPTION: SI | EQ ID NO:1: |            |            |      |
|---|------------|-------------|--------------|-------------|------------|------------|------|
|   | TGGGACAGGC | AGCTCCGGGG  | TCCGCGGTTT   | CACATCGGAA  | ACAAAACAGC | GGCTGGTCTG | 60   |
|   | GAAGGAACCT | GAGCTACGAG  | ccccccccc    | AGCGGGGCGG  | CGGGGNAAGC | GTATACCTAA | 120  |
|   | TCTGGGAGCC | TGCAAGTGAC  | AACAGCCTTT   | GCGGTCCTTA  | GACAGCTTGG | CCTGGAGGAG | 180  |
|   | AACACATGAA | AGAAAGAACC  | TCAAGAGGCT   | TTGTTTTCTG  | TGAAACAGTA | TTTCTATACA | 240  |
|   | GTTGCTCCAA | TGACAGAGTT  | ACCTGCACCG   | TTGTCCTACT  | TCCAGAATGC | ACAGATGTCT | 300  |
|   | GAGGACAACC | ACCTGAGCAA  | TACTGTACGT   | AGCCAGAATG  | ACAATAGAGA | ACGGCAGGAG | 360  |
|   | CACAACGACA | GACGGAGCCT  | TGGCCACCCT   | GAGCCATTAT  | CTAATGGACG | ACCCCAGGGT | 420  |
|   | AACTCCCGGC | AGGTGGTGGA  | GCAAGATGAG   | GAAGAAGATG  | AGGAGCTGAC | ATTGAAATAT | 480  |
|   | GGCGCCAAGC | ATGTGATCAT  | GCTCTTTGTC   | CCTGTGACTC  | TCTGCATGGT | GGTGGTCGTG | 540  |
|   | GCTACCATTA | AGTCAGTCAG  | CTTTTATACC   | CGGAAGGATG  | GGCAGCTAAT | CTATACCCCA | 600  |
|   | TTCACAGAAG | ATACCGAGAC  | TGTGGGCCAG   | AGAGCCCTGC  | ACTCAATTCT | GAATGCTGCC | 660  |
| • | ATCATGATCA | GTGTCATTGT  | TGTCATGACT   | ATCCTCCTGG  | TGGTTCTGTA | TAAATACAGG | 720  |
|   | TGCTATAAGG | TCATCCATGC  | CTGGCTTATT   | ATATCATCTC  | TATTGTTGCT | GTTCTTTTTT | 780  |
|   | TCATTCATTT | ACTTGGGGGA  | AGTGTTTAAA   | ACCTATAACG  | TTGCTGTGGA | CTACATTACT | 840  |
|   | GTTGCACTCC | TGATCTGGAA  | TTTGGGTGTG   | GTGGGAATGA  | TTTCCATTCA | CTGGAAAGGT | 900  |
|   | CCACTTCGAC | TCCAGCAGGC  | ATATCTCATT   | ATGATTAGTG  | CCCTCATGGC | CCTGGTGTTT | 960  |
|   | ATCAAGTACC | TCCCTGAATG  | GACTGCGTGG   | CTCATCTTGG  | CTGTGATTTC | AGTATATGAT | 1020 |
|   | TTAGTGGCTG | TTTTGTGTCC  | GAAAGGTCCA   | CTTCGTATGC  | TGGTTGAAAC | AGCTCAGGAG | 1080 |
|   | AGAAATGAAA | CGCTTTTTCC  | AGCTCTCATT   | TACTCCTCAA  | CAATGGTGTG | GTTGGTGAAT | 1140 |
|   | ATGGCAGAAG | GAGACCCGGA  | AGCTCAAAGG   | AGAGTATCCA  | AAAATTCCAA | GTATAATGCA | 1200 |
|   | GAAAGCACAG | AAAGGGAGTC  | ACAAGACACT   | GTTGCAGAGA  | ATGATGATGG | CGGGTTCAGT | 1260 |
|   | GAGGAATGGG | AAGCCCAGAG  | GGACAGTCAT   | CTAGGGCCTC  | ATCGCTCTAC | ACCTGAGTCA | 1320 |
|   | CGAGCTGCTG | TCCAGGAACT  | TTCCAGCAGT   | ATCCTCGCTG  | GTGAAGACCC | AGAGGAAAGG | 1380 |

### RAW SEQUENCE LISTING PATENT APPLICATION US/08/509,359

DATE: 06/17/96 TIME: 10:08:48

INPUT SET: S11080.raw

| 100 |            |            |            |            |            |            |      |
|-----|------------|------------|------------|------------|------------|------------|------|
| 101 | GGAGTAAAAC | TTGGATTGGG | AGATTTCATT | TTCTACAGTG | TTCTGGTTGG | TAAAGCCTCA | 1440 |
| 102 |            |            |            |            |            |            |      |
| 103 | GCAACAGCCA | GTGGAGACTG | GAACACAACC | ATAGCCTGTT | TCGTAGCCAT | ATTAATTGGT | 1500 |
| 104 |            |            |            |            |            |            |      |
| 105 | TTGTGCCTTA | CATTATTACT | CCTTGCCATT | TTCAAGAAAG | CATTGCCAGC | TCTTCCAATC | 1560 |
| 106 |            |            |            | •          |            |            |      |
| 107 | TCCATCACCT | TTGGGCTTGT | TTTCTACTTT | GCCACAGATT | ATCTTGTACA | GCCTTTTATG | 1620 |
| 108 |            |            |            |            |            |            |      |
| 109 | GACCAATTAG | CATTCCATCA | ATTTTATATC | TAGCATATTT | GCGGTTAGAA | TCCCATGGAT | 1680 |
| 110 |            |            |            |            |            |            |      |
| 111 | GTTTCTTCTT | TGACTATAAC | CAAATCTGGG | GAGGACAAAG | GTGATTTTCC | TGTGTCCACA | 1740 |
| 112 |            |            |            |            |            |            |      |
| 113 | TCTAACAAAG | TCAAGATTCC | CGGCTGGACT | TTTGCAGCTT | CCTTCCAAGT | CTTCCTGACC | 1800 |
| 114 |            |            |            |            |            |            |      |
| 115 | ACCTTGCACT | ATTGGACTTT | GGAAGGAGGT | GCCTATAGAA | AACGATTTTG | AACATACTTC | 1860 |
| 116 |            |            |            |            |            |            |      |
| 117 | ATCGCAGTGG | ACTGTGTCCT | CGGTGCAGAA | ACTACCAGAT | TTGAGGGACG | AGGTCAAGGA | 1920 |
| 118 |            |            |            |            |            |            |      |
| 119 | GATATGATAG | GCCCGGAAGT | TGCTGTGCCC | CATCAGCAGC | TTGACGCGTG | GTCACAGGAC | 1980 |
| 120 |            |            |            |            |            |            |      |
| 121 | GATTTCACTG | ACACTGCGAA | CTCTCAGGAC | TACCGGTTAC | CAAGAGGTTA | GGTGAAGTGG | 2040 |
| 122 |            |            |            |            |            |            |      |
| 123 | TTTAAACCAA | ACGGAACTCT | TCATCTTAAA | CTACACGTTG | AAAATCAACC | CAATAATTCT | 2100 |
| 124 |            |            |            |            |            |            |      |
| 125 | GTATTAACTG | AATTCTGAAC | TTTTCAGGAG | GTACTGTGAG | GAAGAGCAGG | CACCAGCAGC | 2160 |
| 126 |            |            |            |            |            |            |      |
| 127 | AGAATGGGGA | ATGGAGAGGT | GGGCAGGGGT | TCCAGCTTCC | CTTTGATTTT | TTGCTGCAGA | 2220 |
| 128 |            |            |            |            |            |            |      |
| 129 | CTCATCCTTT | TTAAATGAGA | CTTGTTTTCC | CCTCTCTTTG | AGTCAAGTCA | AATATGTAGA | 2280 |
| 130 |            |            |            |            |            |            |      |
| 131 | TGCCTTTGGC | AATTCTTCTT | CTCAAGCACT | GACACTCATT | ACCGTCTGTG | ATTGCCATTT | 2340 |
| 132 |            |            |            |            |            |            |      |
| 133 | CTTCCCAAGG | CCAGTCTGAA | CCTGAGGTTG | CTTTATCCTA | AAAGTTTTAA | CCTCAGGTTC | 2400 |
| 134 |            |            |            |            |            |            |      |
| 135 | CAAATTCAGT | AAATTTTGGA | AACAGTACAG | CTATTTCTCA | TCAATTCTCT | ATCATGTTGA | 2460 |
| 136 |            |            |            |            |            |            |      |
| 137 | AGTCAAATTT | GGATTTTCCA | CCAAATTCTG | AATTTGTAGA | CATACTTGTA | CGCTCACTTG | 2520 |
| 138 |            |            |            |            |            |            |      |
| 139 | CCCCAGATGC | CTCCTCTGTC | CTCATTCTTC | TCTCCCACAC | AAGCAGTCTT | TTTCTACAGC | 2580 |
| 140 |            |            |            |            |            |            |      |
| 141 | CAGTAAGGCA | GCTCTGTCGT | GGTAGCAGAT | GGTCCCACTT | ATTCTAGGGT | CTTACTCTTT | 2640 |
| 142 |            |            | ,          |            |            |            |      |
| 143 | GTATGATGAA | AAGAATGTGT | TATGAATCGG | TGCTGTCAGC | CCTGCTGTCA | GACCTTCTTC | 2700 |
| 144 |            |            |            |            |            |            |      |
| 145 | CACAGCAAAT | GAGATGTATG | CCCAAAGCGG | TAGAATTAAA | GAAGAGTAAA | ATGGCTGTTG | 2760 |
| 146 |            |            |            |            |            | ,          |      |
| 147 | AAGCAAAAA  | АААААААА   | АААААААА   | A          |            |            | 2791 |
| 148 |            |            |            |            |            |            |      |
|     |            |            |            |            |            |            |      |

149 150

(2) INFORMATION FOR SEQ ID NO:2:

151 152

(i) SEQUENCE CHARACTERISTICS:

# RAW SEQUENCE LISTING PATENT APPLICATION US/08/509,359

DATE: 06/17/96 TIME: 10:08:53

INPUT SET: S11080.raw

|     |          |                          |          |              |            |          |       |              |               |             |          |          | IN       | PUT S      | ET: S      | S11080.  |
|-----|----------|--------------------------|----------|--------------|------------|----------|-------|--------------|---------------|-------------|----------|----------|----------|------------|------------|----------|
| 153 |          | (A                       | ) LE     | NGTH         | : 46       | 7 am.    | ino . | acid         | s             |             |          |          |          |            |            |          |
| 154 |          | (B                       | ) TY     | PE:          | amin       | o ac     | id    |              |               |             |          |          |          |            |            |          |
| 155 |          | (C) STRANDEDNESS: single |          |              |            |          |       |              |               |             |          |          |          |            |            |          |
| 156 |          | (D) TOPOLOGY: linear     |          |              |            |          |       |              |               |             |          |          |          |            |            |          |
| 157 |          |                          |          |              |            |          |       |              |               |             |          |          |          |            |            |          |
| 158 |          |                          |          |              |            |          |       |              |               |             |          |          |          |            |            |          |
| 159 | (ii)     | MOL                      | ECUL     |              |            |          |       |              |               |             |          |          |          |            |            |          |
| 160 | • •      |                          |          |              |            |          |       |              |               |             |          |          |          |            |            |          |
| 161 | (xi)     | SEO                      | UENC     | E DE         | SCRI       | PTIO     | N: S  | EO I         | D NO          | :2:         |          |          |          |            |            |          |
| 162 | <b>、</b> | 2                        |          |              |            |          |       | - <u>-</u> - |               |             |          |          |          |            |            |          |
| 163 | Met      | Thr                      | Glu      | Leu          | Pro        | Ala      | Pro   | Leu          | Ser           | Tvr         | Phe      | Gln      | Asn      | Ala        | Gln        | Met      |
| 164 | 1        |                          |          |              | 5          |          |       |              |               | 10          |          |          |          |            | 15         |          |
| 165 | _        |                          |          |              | •          |          |       |              |               |             |          |          |          |            |            |          |
| 166 | Ser      | Glu                      | Asp      | Asn          | His        | Leu      | Ser   | Asn          | Thr           | Val         | Ara      | Ser      | Gln      | Asn        | Asp        | Asn      |
| 167 |          |                          |          | 20           |            |          |       |              | 25            |             | 9        |          | ·        | 30         | шр         | 11011    |
| 168 |          |                          |          |              |            |          |       |              |               |             |          |          |          | -          |            |          |
| 169 | Ara      | Glu                      | Ara      | Gln          | Glu        | His      | Asn   | Asp          | Ara           | Ara         | Ser      | T.eu     | Glv      | His        | Pro        | Glu      |
| 170 | 9        |                          | 35       | <b></b>      | <b>010</b> |          |       | 40           | 9             | 9           | 201      | 200      | 45       |            |            | <b>u</b> |
| 171 |          |                          | 55       |              |            |          |       | 10           |               |             |          |          | 10       |            |            |          |
| 172 | Pro      | T.e.11                   | Ser      | Δsn          | Gly        | Δra      | Pro   | Gln          | Glv           | Δan         | Ser      | Δra      | Gln      | Val        | Val        | Glu      |
| 173 | 110      | 50                       | 501      | 1.0          | 01,        | 9        | 55    | <b>41</b>    | O_y           | AUII        | 501      | 60       | 0211     | Val        | Val        | OIU      |
| 174 |          | 30                       |          |              |            |          | 55    |              |               |             |          | 00       |          |            |            |          |
| 175 | Gln      | Aan                      | Glu      | Glu          | Glu        | Aen      | Glu   | Glu          | T. <b>611</b> | Thr         | Γ.Δ11    | Luc      | mur      | Gl v       | λla        | Tue      |
| 176 | 65       | ASP                      | GIU      | GIU          | GIU        | 70       | GIU   | GIU          | neu           | 1111        | 75       | цуз      | ı yı     | GLY        | AIG        | 80       |
| 177 | 03       |                          |          |              |            | 70       |       |              |               |             | , ,      |          |          |            |            | 30       |
| 178 | Hic      | Val                      | Tla      | Mat          | Leu        | Dha      | Val   | Dro          | Val           | Thr         | LOU      | Cuc      | Mot      | Wal.       | 1757       | val.     |
| 179 | 1115     | Val                      | 110      | Mec          | 85         | riie     | Val   | FIO          | Val           | 90          | neu      | Cys      | Mec      | Val        | 95         | Val      |
| 180 |          |                          |          |              | 03         |          |       |              |               | 90          |          |          |          |            | 93         |          |
| 181 | Val      | λΙα                      | Пhr      | Tla          | Lys        | Sor      | V-1   | Sor          | Dho           | Птт         | Thr      | λκα      | Twe      | Acn        | C1.        | Cln      |
| 182 | Val      | WIG                      | 1111     | 100          | гуз        | Ser      | vaı   | Ser          | 105           | ıyı         | TIII     | ALG      | гÀр      | 110        | СТУ        | GIN      |
| 183 |          |                          |          | 100          |            |          |       |              | 103           |             |          |          |          | 110        |            |          |
| 184 | T 011    | T1.                      | m        | mb ×         | Dro        | Dho      | mb ~  | a1           | N ~ ~         | mb          | a1       | mb       | **-1     | al         | <b>a</b> 1 | 3        |
| 185 | Leu      | тте                      | 115      | THE          | Pro        | Pile     | THE   |              | ASP           | THE         | GIU      | THE      |          | GTÅ        | GIN        | Arg      |
| 186 |          |                          | 113      |              |            |          |       | 120          |               |             |          |          | 125      |            |            |          |
| 187 | *1-      | Т от                     | uic      | Cor          | т1.        | Т олл    | N a m | <b>3</b> ] o | ۸1 a          | T1.         | Mat      | T1.      | C        | W-1        | т1.        | Wa 1     |
| 188 | АТА      | 130                      | птѕ      | Ser          | Ile        | rea      |       | ATA          | АТА           | тте         | мес      |          | ser      | vат        | тте        | val      |
| 189 |          | 130                      |          |              |            |          | 135   |              |               |             |          | 140      |          |            |            |          |
| 190 | Wa I     | Wat                      | Πb~      | т1.          | T 011      | T 011    | 17.7  | 17.5         | T             |             | T        | m        | N        | a          | m          | T        |
| 190 | 145      | Met                      | THE      | TTE          | Leu        |          | νат   | νат          | Leu           | туг         |          | Tyr      | Arg      | cys        | TYL        | _        |
| 192 | 143      |                          |          |              |            | 150      |       |              |               |             | 155      |          |          |            |            | 160      |
|     | v. l     | T1.                      | 174 ~    |              | m          | T        | 71.   | T1.          | C - m         | G = m       | T        | T        | T        | T          | nh -       | nh -     |
| 193 | val      | тте                      | nis      | Ата          | Trp        | Leu      | тте   | тте          | Ser           |             | Leu      | Leu      | Leu      | Leu        |            | Pne      |
| 194 |          |                          |          |              | 165        |          |       |              |               | 170         |          |          |          |            | 175        |          |
| 195 | mh -     | O                        | nh -     | <b>T</b> 1.  | m          | <b>.</b> | a1    | <b>a</b> 1   | ** ~ 7        | m1          | <b>.</b> | m1       | m        |            | 7          |          |
| 196 | Pne      | ser                      | Pne      |              | Tyr        | Leu      | GTA   | GIU          |               | Pne         | ьys      | Thr      | Tyr      |            | vaı        | АТА      |
| 197 |          |                          |          | 180          |            |          |       |              | 185           |             |          |          |          | 190        |            |          |
| 198 | 12-7     | 3                        | m        | <b>-</b> 1 - | ml         | 11.7     | .7 -  | <b>.</b>     | T             | <b>-</b> 1. | m        | 3        | <b>T</b> | <b>a</b> 1 |            | **- 7    |
| 199 | val      | Asp                      | -        | тте          | Thr        | vaı      | ата   |              | Leu           | тте         | тrр      | ASN      |          | стλ        | vaı        | vaı      |
| 200 |          |                          | 195      |              |            |          |       | 200          |               |             |          |          | 205      |            |            |          |
| 201 | <i></i>  |                          |          | -            |            | '        | _     | _            | 7             | _           |          | _        | _        |            |            |          |
| 202 | дТÅ      |                          | ITe      | ser          | Ile        | His      | _     | Lys          | GTÀ           | Pro         | Leu      | _        | Leu      | GIn        | GIn        | Ala      |
| 203 |          | 210                      |          |              |            |          | 215   |              |               |             |          | 220      |          |            |            |          |
| 204 |          | _                        | <b>-</b> |              |            | _        | _ =   | _            |               |             | _        | <b>_</b> |          |            | _          | _        |
| 205 | Tyr      | Leu                      | ΙſΕ      | Met          | Ile        | Ser      | Ala   | Leu          | Met           | Ala         | Leu      | Val      | Phe      | ITe        | Lys        | Tyr      |
|     |          |                          |          |              |            |          |       |              |               |             |          |          |          |            |            |          |

## RAW SEQUENCE LISTING PATENT APPLICATION US/08/509,359

DATE: 06/17/96 TIME: 10:08:58

INPUT SET: S11080.raw

|            |     |          |       |              |              |       |       |            |       |      |             |              |          | LIVE       | CIS      | EI: 3 | LLUOU.I |
|------------|-----|----------|-------|--------------|--------------|-------|-------|------------|-------|------|-------------|--------------|----------|------------|----------|-------|---------|
| 206        |     | 225      |       |              |              |       | 230   |            |       |      |             | 235          |          |            |          |       | 240     |
| 207<br>208 | •   | T av     | Pro   | <b>al.</b> . | M            | mb    | 87.0  | m          | T     | T1.  | T 011       | 27.0         | v-1      | T]_        | C        | W-1   | П       |
| 208        |     | Leu      | PIO   | GIU          | тгр          | 245   | Ата   | тгр        | Leu   | тте  | 250         | АТА          | νат      | тте        | ser      | 255   | Tyr     |
| 210        |     |          |       |              |              | 243   |       |            |       |      | 230         |              |          |            |          | 233   |         |
| 211        |     | Asp      | Leu   | Val          | Δla          | Val   | Leu   | Cvs        | Pro   | Lvs  | Glv         | Pro          | Leu      | Ara        | Met      | Leu   | Val     |
| 212        |     |          |       |              | 260          |       |       | 0,0        |       | 265  | <b>-</b> -1 |              |          | 5          | 270      |       | ,       |
| 213        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 214        |     | Glu      | Thr   | Ala          | Gln          | Glu   | Ara   | Asn        | Glu   | Thr  | Leu         | Phe          | Pro      | Ala        | Leu      | Ile   | Tvr     |
| 215        |     |          |       | 275          |              |       |       |            | 280   |      |             |              |          | 285        |          |       | -4-     |
| 216        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 217        |     | Ser      | Ser   | Thr          | Met          | Val   | Trp   | Leu        | Val   | Asn  | Met         | Ala          | Glu      | Gly        | Asp      | Pro   | Glu     |
| 218        |     |          | 290   |              |              |       |       | 295        |       |      |             |              | 300      |            |          |       |         |
| 219        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 220        |     | Ala      | Gln   | Arg          | Arg          | Val   | Ser   | Lys        | Asn   | Ser  | Lys         | Tyr          | Asn      | Ala        | Glu      | Ser   | Thr     |
| 221        |     | 305      |       |              |              |       | 310   |            |       |      |             | 315          |          |            |          |       | 320     |
| 222        |     |          |       | _            |              |       |       |            |       |      |             |              |          |            | _        | _     | _       |
| 223        |     | Glu      | Arg   | Glu          | Ser          |       | Asp   | Thr        | Val   | Ala  |             | Asn          | Asp      | Asp        | Gly      | _     | Phe     |
| 224        |     |          |       |              |              | 325   |       |            |       |      | 330         |              |          |            |          | 335   |         |
| 225        |     | <b>a</b> | a1    | <b>a</b> 1   | m            | a1    |       | <b>a</b> 1 | •     | •    | <b>a</b>    | ***          | <b>.</b> | <b>a</b> 1 | <b>D</b> |       | •       |
| 226        |     | ser      | Glu   | GTU          | _            | GIU   | Ата   | GIN        | arg   | _    | ser         | HIS          | Leu      | GTÀ        |          | HIS   | Arg     |
| 227<br>228 |     |          |       |              | 340          |       |       |            |       | 345  |             |              |          |            | 350      |       |         |
| 229        |     | 202      | Thr   | Dro          | <b>a</b> 1,, | 602   | A ~~  | . ה        | A 1 a | v.1  | a1 n        | <b>01</b> 11 | T 011    | 802        | 802      | Cor   | т1.     |
| 230        |     | Sel      | 1111  | 355          | GIU          | Ser   | Arg   | АТА        | 360   | val  | GIII        | GIU          | Leu      | 365        | Ser      | Ser   | TIE     |
| 231        |     |          |       | 333          |              |       |       |            | 300   |      |             |              |          | 303        |          |       |         |
| 232        |     | Leu      | Ala   | Glv          | Glu          | asa   | Pro   | Glu        | Glu   | Ara  | Glv         | Val          | Lvs      | Leu        | Glv      | Leu   | Glv     |
| 233        |     |          | 370   | 1            |              |       |       | 375        |       | 5    | 2           |              | 380      |            | 1        |       | 1       |
| 234        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 235        |     | Asp      | Phe   | Ile          | Phe          | Tyr   | Ser   | Val        | Leu   | Val  | Cly         | Lys          | Ala      | Ser        | Ala      | Thr   | Ala     |
| 236        |     | 385      |       |              |              |       | 390   |            |       |      |             | 395          |          |            |          |       | 400     |
| 237        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 238        |     | Ser      | Gly   | Asp          | Trp          |       | Thr   | Thr        | Ile   | Ala  |             | Phe          | Val      | Ala        | Ile      |       | Ile     |
| 239        |     |          |       |              |              | 405   |       |            |       |      | 410         |              |          |            |          | 415   |         |
| 240        |     |          | _     | _            | _            |       | _     | _          | _     | _    | - <b>-</b>  |              |          | _          | _        |       | _       |
| 241        |     | GTA      | Leu   | Cys          |              | Thr   | Leu   | Leu        | Leu   |      | Ala         | ITe          | Phe      | Lys        | _        | Ala   | Leu     |
| 242        |     |          |       |              | 420          |       |       |            |       | 425  |             |              |          |            | 430      |       |         |
| 243<br>244 |     | Dro      | Ala   | Γ 011        | Dro          | T1.   | Cor   | T1.        | Th r  | Dho  | <u>ما</u>   | T 011        | นาไ      | Dho        | m        | Dho   | . ה     |
| 244        |     | PIO      | Ата   | 435          | PIO          | TIE   | per   | TTE        | 440   | FILE | сту         | Leu          | val      | 445        | ıyı      | FILE  | ATG     |
| 246        |     |          |       | 433          |              |       |       |            | 440   |      |             |              |          | 443        |          |       |         |
| 247        |     | Thr      | Asp   | Tur          | Leu          | Val   | Gln   | Pro        | Phe   | Met  | Asp         | Gln          | Leu      | Ala        | Phe      | His   | Gln     |
| 248        |     |          | 450   | -1-          |              |       | ·     | 455        |       |      |             | <b></b>      | 460      |            |          |       | <b></b> |
| 249        |     |          | 100   |              |              |       |       |            |       |      |             |              | 100      |            |          |       |         |
| 250        |     | Phe      | Tyr   | Ile          |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 251        |     | 465      | -     |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 252        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 253        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 254        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 255        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 256        | (2) | INFO     | RMATI | ON I         | FOR S        | SEQ ] | D NO  | 3:         |       |      |             |              |          |            |          |       |         |
| 257        |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |
| 258        |     | (i)      | SEQU  | JENCE        | E CHA        | ARACT | PERIS | STICS      | S:    |      |             |              |          |            |          |       |         |
|            |     |          |       |              |              |       |       |            |       |      |             |              |          |            |          |       |         |

## **SEQUENCE VERIFICATION REPORT** PATENT APPLICATION *US/08/509,359*

DATE: 06/17/96 TIME: 10:09:03

INPUT SET: S11080.raw

Line

Error

Original Text